

**TITLE OF GROUP CLASSES: ENGINEERING TECHNICIAN IV**

**TITLE OF CLASS IN GROUP:**

**Class Code:**

**HIGHWAY MAINTENANCE**

**02770901**

**MATERIALS**

**02770902**

**ADMINISTRATIVE SERVICES**

**02770903**

**NATURAL RESOURCES**

**02770904**

**CONSTRUCTION RECORDS**

**02770905**

**Pay Grade: 27A**

**EO: B**

**CLASS DEFINITION:**

**GENERAL STATEMENT OF DUTIES:** To perform complex technical or supervisory engineering work in the area of specialization indicated by the title of the class of position; and to do related work as required.

**SUPERVISION RECEIVED:** Works under the general supervision of superior where considerable latitude is granted for the exercise of independent judgment in completion of work assignments which are usually outlined; work is reviewed in process and upon completion.

**SUPERVISION EXERCISED:** Plans, assigns, supervises and reviews the work of engineering technicians and other personnel assigned to staff.

**ILLUSTRATIVE EXAMPLES OF WORK PERFORMED:**

Under supervision, in the area of specialization indicated in the title of the class of position:

**Highway Maintenance:**

To supervise and conduct inspections of certain engineering projects and construction work done to alter existing state roadway by utilities, commercial and residential contractors; to inspect all items going into such projects; to be responsible for the inspection of the workmanship and practices of contractors in restoring state roadways that have been altered by permit-approved projects; to assist a superior in the review of the applications for permits with engineering plans, specifications and designs submitted by contractors, architects or engineers, to conduct construction and maintenance project activities; to interpret provisions of contracts, plans, specifications and designs; to ensure that planned work schedules are maintained to prevent and minimize interruptions on roadways; to plan, supervise and review the work of staff engaged in the continuous inspection of workmanship, materials and methods used by applicants;

**Materials:**

To be responsible for the planning, supervision and review of the materials testing activities on bridge, highway construction or maintenance projects; to assist in the preparation of materials specifications; to be responsible for the review of work of engineering technicians and other personnel assigned to materials, plants, and construction projects; and to assist in materials research and evaluation.

**Administrative Services:**

To be responsible for the preparation of contracts and specifications for the construction, reconstruction, and maintenance of state highways and bridges; to review construction contracts and specifications prepared by consultant engineering firms for use on specific state and federal-aid highway and bridge construction projects to ensure that all items are covered and are in agreement with the appropriate state and federal requirements; to review requests by contractors for changes in the plans in accordance with delegated authority; to prepare quantity computations and cost estimates for contract proposals; to be responsible for updating State Secondary Road Program to enforce requirements set forth by the Federal Highway Administration; and to negotiate with consulting engineers on fees for contracts covering numerous corridor studies, location design reports, and design reports for design contracts for preparation of construction plans, specifications and estimates on interstate highways, primary and secondary roads and to prepare such consultant agreements, or to exercise

supervision for monitoring and evaluating construction, reconstruction and maintenance of state highway, bridge and maintenance contracts; to ensure compliance with all federal and state regulations; to be responsible for updating the secondary road program and enforce requirements set forth by the FHWA; to supervise and participate in reviewing and evaluating final quantities used in various construction projects in the transportation area; to ensure that all work accomplished and materials utilized conform with appropriate federal and state specifications and regulations; to check plans, cross sections, diagrams, sketch computation sheets and all trigonometric and engineering mathematical formulas; and to supervise methods and procedure reviews that are conducted on highway and bridge contracts in accordance with the contract specifications, special provisions and the Rhode Island Standard Specifications for Road and Bridge Construction.

#### **Natural Resources:**

To assist a professional engineer by performing complex and difficult technical or supervisory engineering work related to: the development, construction and maintenance of state parks, recreation areas, structures and grounds as part of the Green Acres Program; the planning and construction of roads, water systems, buildings and related structures in state parks and recreation areas; the preparation of descriptions of lands to be acquired by the state, the making of cost estimates for the acquisition of land for the roads, water systems and buildings on state parks recreation areas; the conduct of surveys and the preparation of topographical maps of land purchases, evaluation of wetlands and water quality project management.

#### **Construction Records:**

To be responsible for, supervise and assist in technical support and record keeping tasks within the state's road and bridge construction program; to install appropriate computer software applications for new construction projects and render assistance in the resolution of any record keeping problems as they relate to individual projects; to provide computer orientation and training to new employees, and update existing employees on revisions and/or the implementation of new procedures and practices; to monitor problems and recommend program revisions to correct those problems that too frequently occur; to utilize standardized computer software applications in order to set up, input and maintain all record keeping documentation for bridge and/or road construction projects; to ensure that computerized records are maintained consistent with the Procedures of Uniform Record Keeping (PURK); to enter into a computer, daily item slips and back-up for work performed by contractors; to consolidate vital specific project data, and prepare reports thereon related to item ledger sheets, other project worksheets, materials reports, and time sheets for projects; to enter via use of a personal computer the specific data as it relates to the appropriate category; to assist in the preparation of and to enter Reports of Change, contract addendum, biweekly progress payments, correspondence updates, and other information related to the project; to maintain accountability of all phases of construction activity through the utilization of a computerized record keeping system; to utilize established practices and procedures resulting in the finalization of the record keeping process for the project, upon project completion.

To do related work as required.

### **REQUIRED QUALIFICATIONS FOR APPOINTMENT:**

**KNOWLEDGE, SKILLS AND CAPACITIES:** A thorough knowledge of, and the ability to apply the basic principles and practices of civil engineering applicable to the area of specialization indicated in the title of the class of position; a thorough knowledge of the kinds of basic materials, elements or products of the area of specialization indicated in the title of the class of position; a thorough knowledge of, and the ability to apply, the basic principles of the systems of measurements applicable to the area of specialization indicated in the title of the class of position; a thorough knowledge of the equipment (to include computer technology), instruments, techniques and procedures applicable to the area of specialization indicated in the title of the class of position; a thorough knowledge of the procedures, rules, guidelines and standards in the area of specialization indicated in the title of the class of position; the ability to read and interpret technical specifications and civil engineering plans, maps and drawings; the ability to prepare clear, sound, accurate and informative reports; the ability to

plan, organize, supervise and review the work of engineering technicians and other personnel engaged in highway construction or maintenance or materials testing; and related capacities and abilities.

**EDUCATION AND EXPERIENCE:**

Education: Such as may have been gained through: graduation from a college of recognized standing or graduation from a community college with a certificate of completion of a curriculum in civil engineering technology, or completion of a technical institute curriculum accredited by the Engineer's Council for Professional Development; and

Experience: Such as may have been gained through: employment in an important supervisory capacity at the level of an engineering technician in a public agency or in private industry which had provided experience in an area of specialization indicated in the title of the class of position.

Or, any combination of education and experience that shall be substantially equivalent to the above education and experience.

Class Revised: December 19, 1999

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